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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/406,684	09/27/1999	KAZUHIKO TSUDA	1114-134	1852

23117 7590 02/26/2003

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EXAMINER

SCHECHTER, ANDREW M

ART UNIT PAPER NUMBER

2871

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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09/406,684 APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT PAPER

17

DATE MAILED:

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Commissioner of Patents and Trademarks

Please see attached pages.

Interference

1. All claims are allowable. However, due to a potential interference, *ex parte* prosecution is SUSPENDED FOR A PERIOD OF 6 MONTHS from the date of this letter. Upon expiration of the period of suspension, applicant should make an inquiry as to the status of the application.

Allowable Subject Matter

2. Claims 8-14, 17, 19, and 22-107 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The amendments of 6 December 2002 has overcome the previous rejections of claims 19 and 22 in view of *Ichimura*. The prior art does not disclose a method of forming an LCD with a reflective film using first and second photomasks with light blocking and light transmitting portions for forming asperities in a first region and contact holes in a second region of a photosensitive resin as recited by the amended claims.

Claims 19 and 22 are therefore allowable.

The amended limitation of claim 14 is that the exposure amounts of the first and second photomasks are the same. This is not disclosed by the prior art of record. When using a single gray-tone mask there is obviously only one exposure amount; however, the examiner is not aware of any motivation for using the same exposure amount when there are two distinct photomasks. Claim 14 is therefore allowable.

The prior art does not fairly suggest using a single photomask with light-transmitting, light-intercepting, and semi-light-transmitting portions to form asperities and contact holes, in the process of making a reflective LCD. Claim 11 is therefore allowable.

Independent claims 11, 14, 19, and 22 are therefore allowable, as are their dependent claims 8-10, 12, 13, 17, and 23-25.

Regarding the new claims 26-107 of 21 February 2003, these claims are also allowable over the prior art. Claims 26-28, 39, 50, and 106 recite a method of forming an LCD with a reflection electrode using first and second photomasks with light blocking and light transmitting portions to perform two exposures in first and second regions of a photosensitive resin. Analogously to claims 19 and 22 above, the prior art does not disclose this, so claims 26-28, 39, 50, and 106 are allowable, as are their dependent claims 29-38, 40-49, 51-97, and 107.

Claims 98-105 recite a method of making an LCD with a reflecting film by applying a positive or negative photosensitive resin, exposing a first region to form asperities and a second region to form a thinner, concave portion. The claims further require the photomask for the first region to have light blocking (or circular or polygonal shaped) portions of 20-40% the total area or of 5-50 μm center-to-center distances. The claims further require a step of heat-treating the developed resin. The prior art does not disclose this, in any of the recited combinations. Considering the prior art of record, specifically: *Ichimura* does not disclose the limitations of 20-40% area or 5-50 μm distances; *Mitsui* '635 and *Mitsui* '345 disclose using two resins (discussed in Paper

No. 7); *Komatsubara* discloses wet etching instead of a photomask and photolithographic exposure; *Japanese Patent Document No. 9-90426* does not disclose a step of heat-treating the resin before forming the reflecting film. Claims 98-105 are therefore allowable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4711 for regular communications and (703) 746-4711 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AS
Andrew Schechter
February 24, 2003

[Signature]
FEB 24 2003
ANDREW SCHECHTER
RECEIVED
U.S. PATENT AND TRADEMARK OFFICE
2003

Interview Summary	Application No.	Applicant(s)
	09/406,684	TSUDA ET AL.
	Examiner Andrew Schechter	Art Unit 2871

All participants (applicant, applicant's representative, PTO personnel):

(1) Andrew Schechter. (3) _____.

(2) Joseph Rhoa, Reg. No. 37,515. (4) _____.

Date of Interview: 30 January 2003.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
If Yes, brief description: _____.

Claim(s) discussed: All.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) It is not necessary for applicant to provide a separate record of the substance of the interview(if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Attorney for the applicant informed the examiner that a supplemental amendment would be filed deleting figures 22 and 23, and replacing figure 24 with a new figure 22 showing the actual mask from the prior art reference discussed in the specification. The examiner informed the attorney for the applicant that he was considering whether an interference was appropriate between some of the present claims and some of those in U.S. Patent No. 6,469,759 to Jang et al.

AS
Andrew Schechter
30 January 2003